

NORTHAMPTON COUNTY MEDICAL SOCIETY.—The Northampton County Medical Society held its August meeting yesterday afternoon in the Y. M. C. A. rooms of Easton. There were present Drs. Abernethy, Bachman, D. Engelman, J. P. Engelman, Gotwald, Green, Grower, Hunt, Laubach, Lawall, McIntire, Ott, J. Sandt, A. K. Seem, and A. Seip. Also, Dr. Stabley, of the Dauphin County Society, and Dr. W. M. Baird, of the Warren District Society of New Jersey. The meeting proved to be an interesting one in the discussion of the treatment of various diseases. The Committee on School Hygiene gave a partial report on the lighting of schools, and a supplemental report on ventilation, both of which topics being of so much importance that we publish the report in full.

REPORT OF THE COMMITTEE ON SCHOOL HYGIENE—LIGHTING.

The scientific study of Physiological Optics is of comparatively recent origin, and a rational method of diagnosis and treatment of those affections of the eye which depend upon its optical condition is still more recent. From this fact it is not surprising that a great many cases of such trouble should now be found, which formerly were not recognized, or the trouble assigned to some other cause. But, after making due allowance for the increased delicacy in the methods of investigation, a suspicion arose that cases of ametropia, or faulty vision from imperfect optical condition, were on the increase. Investigations, both in Europe and America, confirm these suspicions to such an extent that it amounts to a demonstration. The condition which seems to be most rapidly on the increase is myopia, or near-sight, and to that condition alone let us confine our attention for the present.

It has been shown that there is a greater proportion of near-sighted persons among educated people. Thus Dr. Lucien Howe, of Buffalo, examined the eyes of 1,008 school children, of whom 19.7 per cent. were myopic. While of "213 cases of eye disease seen during the past year among the paupers of Buffalo, the record shows only 3.5 per cent. to have been near-sighted."

Furthermore it appears that myopia is more prevalent among the higher classes of our educational system than in the lower classes. Thus Dr. C. R. Agnew, of New York, found in the Brooklyn Polytechnic School 10 per cent. of myopes in the academic department and 58 per cent. in the collegiate. It might be said that this is accounted for by the coincidence of the near-sighted scholars keeping on in their studies, while the possessors of normal eyes leave school for other pursuits. But the same results have been obtained in too many observations to make it mere coincidence. Besides Dr. Haskett Derby, of Boston, found 28 per cent. of the class of '73 of Amherst myopic in their Freshman year; 50 per cent. of whom were more myopic in the following year. And the investigations of one of your committees on the students of Lafayette—as yet incomplete—corroborate the deduction of an increase in the proportion of near-sighted people in the higher classes by its development in men who previously had optically normal eyes.

Another fact is also patent, that those nations famous for their studious habits have a far greater proportion of myopes in their population. Germany can no longer exempt near-sighted men from military duty. It is safe to conclude that there is a tendency in studious habits to produce near-sight.

Can there be any evil effects resulting from near sight? A few sentences from Donder's "Anomalies of Refraction and Accommodation" will answer this question.

"Every progressive myopia is threatening with respect to the future. If it continues progressive the eye will soon, with troublesome symptoms, become less available, and not infrequently at the age of fifty or sixty, if not much earlier the power of vision is irrevocably lost."

Again: "Not only is the myope not in a condition to discharge all civil duties, not only is he limited in the choice of his position in society, but in the higher degrees myopia leads to disturbance of the power of vision and threatens its subject with incurable blindness."

If these things be so and Prof. Donders is universally acknowledged as the highest authority, it becomes a very important matter to determine the cause of myopia, the conditions favorable for its increase, and if there be any means of prevention. From the facts stated it would seem that study and near sight in some way bear the relation of cause and effect. In what then do students habits differ from those in other occupations in life? Students are apt to remain for a long time in rooms containing a vitiated atmosphere, with their heads bent over their desks, reading or writing at or near their near point of vision, and keeping their gaze fixed upon the page without relaxation; and this, too, frequently, with insufficient light, which often comes in an imperfect direction. The vitiated air lowers the whole tone of the system—makes it less resistant, so to speak. The position of the head and nearness of the object act conjointly in such a manner as to cause pressure perpendicular to the antero-posterior axis, and the eye does not possess sufficient strength to elongate it in this axis. This will cause the eye to become near-sighted. The insufficient light demands an additional strain upon the eye, aggravating the pressure by making it a necessity that objects to be seen be placed near the eyes.

There is one other cause, which only increases the importance of the subject. Again to quote Donders: "Even on many emmetropic eyes simple tension for near objects has but little effect. In fact the predisposition is almost invariably congenital, and in that case it is, moreover, nearly always hereditary." So that any conditions that are prone to develop near sight, not only puts the possessors themselves on a path that is liable to lead to blindness, but also render the succeeding generations more susceptible to the same causes and more likely to obtain the worst results. The increase of myopia, then, is a subject of great interest to everyone individually, of equal importance to the body politic. The requirements of modern life will not allow us to go back to the old days of general illiteracy: the comfort of the individual and the strength of the State demand a race of people with normal eyes.

A remedy must be found, and, because of the new conditions, it is no reflection on the wisdom of the fathers should this remedy cause an innovation in time honored methods. If this increase of near sight is due to school life, we must either modify the condition of school life to prevent this increase or permit the illiterate to become the only healthy people in the nation.

Thus far we have confined our thoughts to myopic eyes. Does faulty hygienic conditions work ill only in this class of eyes? We think not.

It is a well determined fact that most cases of squint are due to that optical condition of the eye known as hypermetropia or over sight, a condition directly opposite to that of near sight. We think that the extra strain frequently put on the eye in school life is the immediate cause of many cases of squint. And when we consider that so many cases of squint are neglected, finally causing blindness of the deviating eye, it is not a slight additional grievance. Besides the optical troubles mentioned there are many of the unclassifiable cases of asthenopia which have their cause, or are made worse from faulty hygienic conditions in school life. The subject then is of sufficient importance to warrant this lengthy discussion, and the question of remedy should receive our closest attention. We have asserted a triple cause—poor ventilation, unproperly constructed seats and desks and imperfect lighting—to which may be added a fourth, improper methods of study. In regard to ventilation, a previous report has already shown how deficient are our schools; the matter of seats, &c., is reserved for another report. Our inquiry has not extended into the methods of study, so there remain for present consideration only the subject of lighting. The subject divides itself into two topics. A, The direction of the light; and B, The amount of light. The first division is sub-divided into two: First, What direction should the light come in relation to the scholar, i. e., from his left or right side; from the back or front; and Secondly, the angle that the light should fall upon the desk; whether low down or high up approaching the vertical. Let us consider them in the order proposed. What bearing on the scholar? We want the page illuminated, and not the eye and not covered with fixed or moving shadows. These properties we do not want. The light is then said to be good, and the scholar should be condemned. Shadows will be thrown upon the page if the light comes from the right-hand side or from the back; these directions are therefore to be avoided; while light from the left is nearly or quite free from these objections, and in the event of shadow being cast, it is the best to have it from the left, as it is possible. If it is always to have the light from the left, then it should be directed towards the scholar, and the scholar should be condemned. Shadows will be thrown upon the page if the light comes from the right-hand side or from the back; these directions are therefore to be avoided; while light from the left is nearly or quite free from these objections, and in the event of shadow being cast, it is the best to have it from the left, as it is possible. If it is always to have the light from the left, then it should be directed towards the scholar, and the scholar should be condemned.

We desire to call attention to the following school-rooms as especially bad:

Easton—First Ward.—The Grammar Schools.

These are situated in the third story of the school building at the corner of Fourth and Ferry streets. In order to obtain additional school room and the class room. As a method of lighting this is the only objectionable. But the class room contains the school room, which is too small, while the total amount of light is still too small, while the proportion of windows is still too small, while the proportion of space is only 1 to 18.4, or not quite one-third

of the room.

Second Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Third Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Fourth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Fifth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Sixth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Seventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Eighth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Ninth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Tenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Eleventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twelfth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Fourteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Fifteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Sixteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Seventeenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Eighteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Nineteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-first Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-second Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-third Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-fourth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-fifth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-sixth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-seventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-eighth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Twenty-ninth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirtieth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-first Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-second Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-third Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-fourth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-fifth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-sixth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-seventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-eighth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Thirty-ninth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Fortieth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-first Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-second Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-third Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-fourth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-fifth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-sixth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-seventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-eighth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-ninth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-tenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-eleventh Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-twelfth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-thirteenth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-fourth Ward.—The Hecktown school.

Or more than one-half of the schools reported have not a sufficient amount of proper light.

Forty-fifth Ward.—The Hecktown school.